Sean Reid
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## Education

MA/PhD Student – University of California, Santa Barbara — September 2019 – June 2024 (Expected)
Bachelor of Science – University of Utah — May 2015

- Geography Major
- Arabic Minor
- Certificates in GIS, Geospatial Intelligence, and Remote Sensing
- GPA: 3.923 (Cum Laude)

## Research Interests

My research interests are broadly in urban/population dynamics and migration to understand how they are influenced by events such as climate change, natural disasters, health hazards, and conflict.

## Publications

Publications Forthcoming

## Conference Posters/Presentations

- **Sean C. Reid**, Susan Cassels. "Spatial patterns of migration among men who have sex with men in the United States." *Population Association of America Annual Meeting.* Paper/Presentation. St. Louis, MO. May 2021.
- **Sean C. Reid**, S.D. Arabadjis, C. McWhorter. "Just 'N Case: Network Connectivity Among Students Enrolled." *USCB Broom Center for Demography COVID-19 Mini-Conference.* Virtual Presentation. September 2020
- **Sean C. Reid**, J.A. Cooper, Cassidy Levy, Eric Weber, Jake McKee, Jessica Moehl. "Fusing Land-Use Data and Population Density Estimates for High Resolution Population Modeling: LandScan HD." Poster. *American Geophysical Union Annual Meeting.* Washington D.C. December 2018
- **Sean C. Reid**, Tyler J. Larson. "Spatial Accessibility to Mammography Clinics Along the Wasatch Front." Presentation. *Utah Geographic Information Council.* Richfield, UT. July 2014

## Grants, Awards, Fellowships, Honors

- Multidisciplinary Research on COVID-19 and its Impacts Grant Recipient. June 2020
- College of Social and Behavioral Science Honor Roll Scholarship Recipient, 2014-2015
- Continuing Students in Geography Scholarship Recipient (x2), 2012-2014
- Merrill Ridd Scholarship Recipient, 2013-2014
- Outstanding Undergraduate Award for Department of Geography (x3), 2012-2015
- Member of Gamma Theta Upsilon Honor Society
- Dean's List 2011-2015

## Research Experience

Research Assistant – University of California, Santa Barbara June 2020 – Present

- Created IRB approved survey to identify hotspots for HIV interventions
- Created custom map-based question plug-in for the Qualtrics survey environment
- Work as part of large team across multiple University of California campuses to implement and analyze survey
- Automate recoding of ACS data to support research on Latinx destinations in the United States
- Conducted county level dissimilarity index analysis for Latinx populations at the county level in the United States

Research Assistant – University of Utah May 2013 to May 2014

- Conducted transportation modeling using Python and ArcGIS in relation to activity space measures for assessing individuals' access to healthcare in the Salt Lake Valley
- Worked with and manipulated very large datasets exceeding one million records, including census data
- Presented research findings and methods at various conferences
- Worked independently and maintained projected deadlines and deliverables to various sources

## Teaching Experience

World Regions – Geography 2 – University of California, Santa Barbara

- Fall Quarter (September 2019 – December 2019)

Health Geography – Geography 152 – University of California, Santa Barbara

- Winter Quarter (January 2020 – March 2020)
- Winter Quarter (January 2021 – March 2021)

Sex, Drugs, and Geography – Geography 6 – University of California, Santa Barbara

- Spring Quarter (March 2020 – June 2020)
- Spring Quarter (March 2021 – June 2021)

Environmental Decision Making – Geography 185B – University of California, Santa Barbara

- Summer Quarter (August 2021 – September 2021)

Introduction to Python Workshop – Broom Center for Demography at the University of California, Santa Barbara

## Technical Skills

- 8 years of working with GIS and Remote Sensing
- Practical experience using ArcGIS and many analytical extensions
- Practical experience using Python with a focus in process automation across various software
- Basic field data collection
- Experience using various geospatial software including ENVI, PostgreSQL, QGIS and R

## Employment History

Post-Bachelor's Research Associate – Oak Ridge National Lab – 40 hours/week March 2017 – August 2019

- Support efforts to identify buildings using a deep learning model by utilizing high resolution imagery
- Fuse land-use data, population information and building detection outputs to create a high resolution dasymetric population model output
- Work to implement sustainable automated workflows by creating custom modules created in Python
- Manage and develop code in git repository with multiple users
- Manage and update several PostgreSQL databases supporting group research efforts
- Continually analyze data with python and machine learning methods to find ways to improve current workflow
- Participate in reading groups to further understanding of machine learning, deep learning and big data

GIS Technician – Apple Inc. via Apex – 40 hours/week October 2016 – March 2017

- Collaborated with large team to validate and prepare data for production environment in Apple Maps
- Analyzed routing features as part of project to improve routing algorithm
- Created water and vegetation masks on large sample of in-house imagery for proof of concept project to streamline digitization process of natural features
- Automated address validation for in-house software using python and various open source web APIs

Support Representative – Azteca Systems (Cityworks) – 40 hours/week July 2015 – January 2016

- Provided excellent customer service to clients contacting Help Desk with questions concerning issues with the GIS-centric Cityworks software
- Maintained knowledge of extensive SQL Server Database structure and GIS-centric Cityworks software as it applies to city infrastructure management to effectively resolve client issues
- Maintained personal workload as well as managing workload of other employees

Geography Peer Advisor – University of Utah September 2014- May 2015

- Advised students in a safe environment to discuss and plan academic and professional goals
- Mentored and trained future peer advisor

Emergency Management Intern – University of Utah – 20 hours/week October 2013 to May 2015

- Used Python and GIS to conduct spatial analysis to determine optimal assembly points for students, staff, and faculty in the event of an earthquake
- Experience using Hazus software to run earthquake damage models for the University of Utah campus infrastructure and maintaining related databases
- Focused on creating meaningful cartographic products for various departments on the University of Utah campus
- Worked with Emergency Management and Environmental Health and Safety staff to prepare campus for potential emergencies and disasters

## Service

Graduate Student Assembly Representative – University of California, Santa Barabara 2020-Present

Chair's Graduate Advisory Committee – University of California, Santa Barbara 2019-Present

Events Committee – University of California, Santa Barbara 2019-2020

Undergraduate Student Advisory Committee Chair – University of Utah 2012-2014

- Lead/Assisted in creating student activities

- Activities include: surveying and plotting an area for community gardens, mapping of urban gardens in Salt Lake City, conducting analysis for conservation groups, planning events to educate on mapping in areas affected by natural disasters and planning multiple field trips for Jr. high school students to visit the geography department
- Coordinated student reviews of faculty for Retention, Promotion, and Tenure process
- Mentored and trained future chair

College of Social and Behavioral Science Ambassador – University of Utah 2014-2015

- Member of a team of undergraduates that engaged students in college activities
- Held leadership role in connecting the various majors within the College of Social and Behavioral Science

## Professional Society Membership

- American Association of Geographers (AAG)
- American Geophysical Union (AGU)
- Population Association of America (PAA)
- American Society for Photogrammetry and Remote Sensing (ASPRS)

## Relevant Population Studies and Statistics Coursework

***University of California, Santa Barbara***

- *Research in Demography, Department of Economics* *Spring 2021*
  - Demography emphasis requirement consisting of a demographic research/reading group
- *Analytical Methods III, Department of Geography* *Spring 2021*
  - Spatial statistics with a focus on spatial regression, point processes, and random fields
- *Demography, Department of Geography* *Winter 2021*
  - Core concepts in demography including theory and methods related to migration, fertility, and mortality
- *Advanced Statistical Methods B, Department of Statistics* *Winter 2021*
  - Generalized linear models, logistical regression models with a focus on categorical and nonlinear regression models
- *Advanced Statistical Methods A, Department of Statistics* *Fall 2020*
  - General linear models; regression; analysis of variance of fixed, random, and mixed effects models; analysis of covariance; and experimental design
- *Spatial Statistics, Department of Statistics* *Fall 2020*
  - Spatial Covariance Functions, Variograms, Kriging, Gaussian Processes, Estimation Methods and Uncertainty Quantification. Stationary and Non-Stationary Models, Selected Topics from Non-Gaussian Spatial Models, Spatial Point Processes, Areal Data Models, Spatial Networks, Hierarchical Models, Spatio-Temporal Models, and Recent Advances
- *Geo-Social Determinants of Health, Department of Geography* *Winter 2020*
  - Focus on social determinants of health and sources of health disparities from a social science perspective
- *Analytical Methods II, Department of Geography* *Winter 2020*
  - Statistical principles and practice of analyzing geographical data. Topics include bivariate and multiple regression and other multivariate techniques. Emphasis on exploratory data analysis and graphical techniques

- *Population Economics, Department of Economics* *Fall 2019*
    - Course examines the determinants of population change and demographic behavior including household formation and dissolution, marriage and decision-making within households, child bearing and rearing, mortality (including infant mortality) and key forms of human capital investment including schooling and migration
- *Analytical Methods I, Department of Geography* *Fall 2019*
    - Introduction to analytical methods for geography research. Topics include: calculus, differential equations and linear algebra. Emphasis is placed on solving geographically relevant problems and their documentation